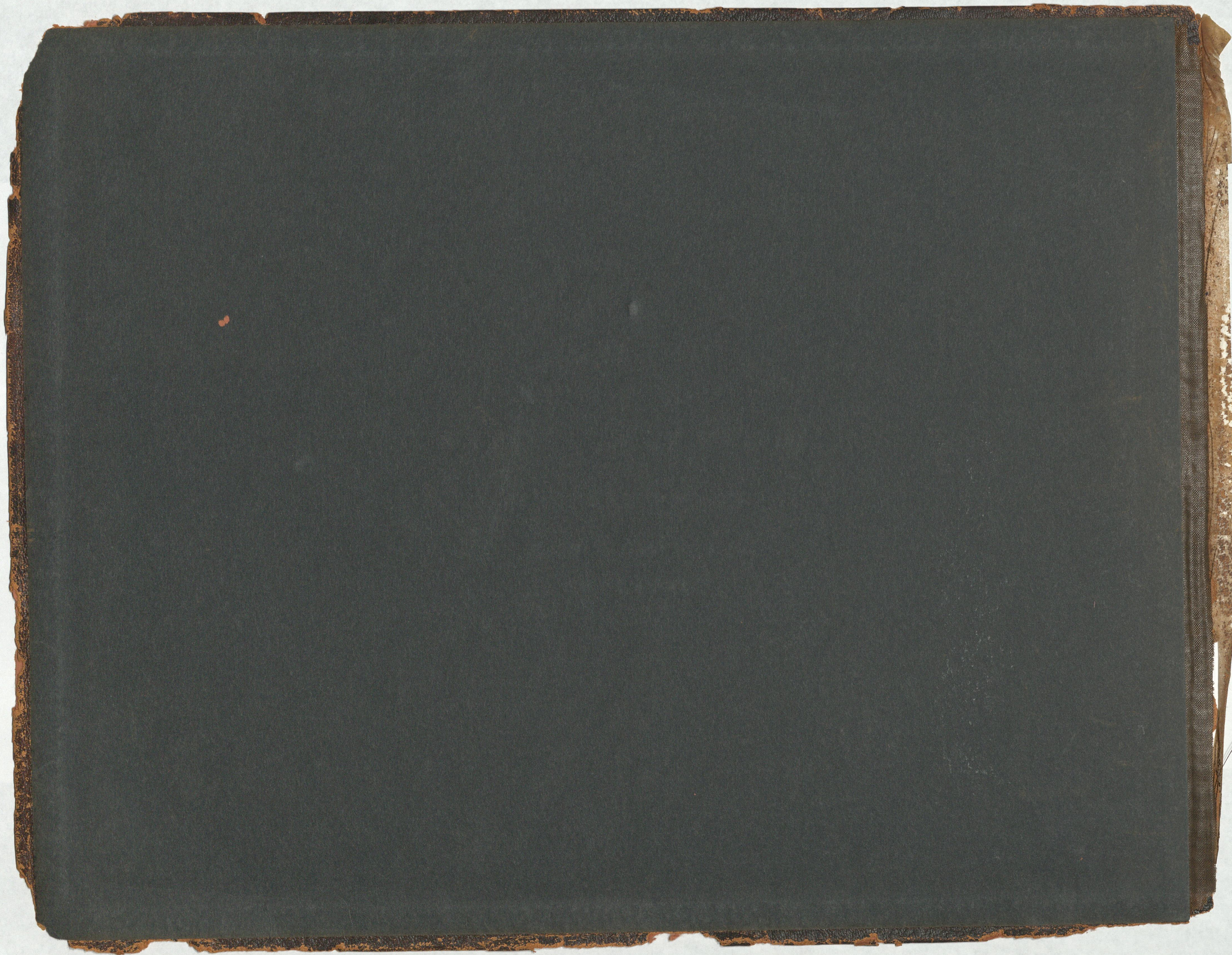


REPORT BY
WM. H. HOLABIRD,
ALONG THE LINE OF
"THE CANANEA, RIO YAQUI & PACIFIC R. R."
SOUTHERN PACIFIC CONCESSION
WEST COAST OF MEXICO
APRIL & MAY 1908



REPORT

by

WM. H. HOLABIRD

ECONOMIC EXPERT

of

OBSERVATIONS MADE ALONG THE LINE
OF RAILWAY CONSTRUCTION

WEST COAST OF MEXICO.

April & May, 1908.



Los Angeles, Cal., May 25, 1908.

Epes Randolph, Esq.,

President Cananea, Rio Yaqui & Pacific Ry.

Dear Sir:

I beg your consideration of the attached report covering my observations along the West Coast of Mexico through the southern portion of the State of Sonora, the entire length of the State of Sinaloa, through the heart of the Territory of Tepic and the southern part of the State of Jalisco.

I traveled over the completed portion of the railways you are now constructing, so far as practicable, and thence by wagon to Guadalajara.

I left Tucson April 5th and arrived at Guadalajara May 20th, 1908, thus viewing the country during the dry season, which prevails from January to June. Harvests were over and new crops had not been planted, consequently I saw the country when it presented an unattractive appearance.

The conclusions I have arrived at are the result of close observation and careful inquiry among the people, aided by my rather wide experience in examining lands and conditions very similar in the United States and foreign countries.

Believing that I have arrived at approximately the truth as to facts, and have good foundation for the theories presented as to the future of the remarkable West Coast of Mexico, I beg to submit my report.

Very truly yours,

Wm. H. Holabird.

Economic Expert,

Southern Pacific Company.



In a construction
Camp. the time
is rather monotonous.
This Coon is quite
well trained

Near Mazatlan



From my window in Mazatlan



1 a wealthy Mexican
2 my Cochero. 3 RR Interpreter



In camp Mazatlan



Culiacan the capital of Sinaloa

THE STATE OF SONORA.-

The State of Sonora, Mexico, is second in area in the Republic; contains 76,900 square miles; the population, a little in excess of 200,000, largely half civilized Indians.

In mineral wealth the State is very rich, having achieved an international reputation through the great copper properties at Cananea and Nacozeri. The mineral zone covers nearly all the mountain system of the State.

The State of Sonora, Mexico, has long been afforded railroad transportation through the Southern Pacific System, between Nogales (on the national boundary line) and Guymas, the chief city and port on the Gulf of California. The corporate title is the "Sonora Railway", a subsidiary property of the Southern Pacific Company.

This Railway greatly stimulated mining development in Western Sonora, but did not reach the great agricultural valley of the Yaqui River which lies to the south of Guymas.

The Concession from the Federal Government of Mexico, known as the "Cananea, Rio Yaqui and Pacific Railroad", now under construction and completed southerly to Alamos and northerly from a junction known as "Corral" (midway between Alamos and Guymas) up the Yaqui River valley as far as "Cumuripa", will, when completed to the American boundary at Douglas, Arizona, open up the richest mineral zone in Western Mexico, a region where lack of transportation and unruly Indians have hitherto retarded mining development.

The completed line southward crosses the Yaqui River Valley, which is of vast area and unusually fertile. The



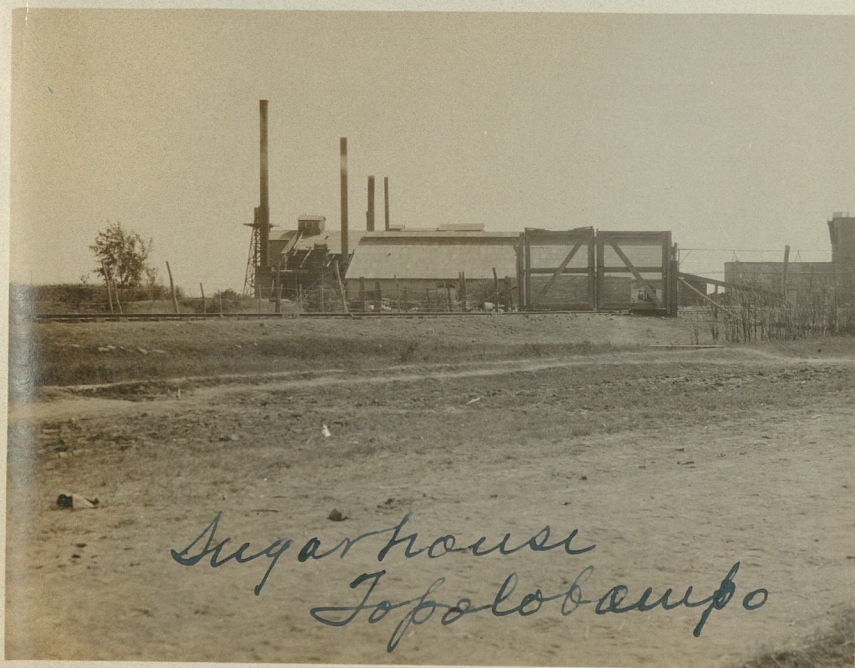
Irrigation System Yaqui River. Sonora Mex



Sugar Co headquarters. below
San Blas. Fuerte River. Sinaloa.
this was the original Topolobampo
colony



Topolobampo
the Hotel



Sugar house
Topolobampo



The town near the
sugar house
Topolobampo



Yagui River Canal
Richardson No.

Yaqui River carrying sufficient water to irrigate from 300,000 to 600,000 acres. The wide range in this estimate is due to the fact that surveys will need to be made before the exact area can be determined.

Already one important irrigation system is under construction by the Richardson Construction Company, the first block of 10,000 acres being now ready for occupation, with adequate canals already built.

This Company owns 550,000 acres, 260,000 acres of which are claimed as perfectly level and irrigable. The Yaqui Valley is exceedingly fertile, free from alkali, with an excellent climate nine months of the year.

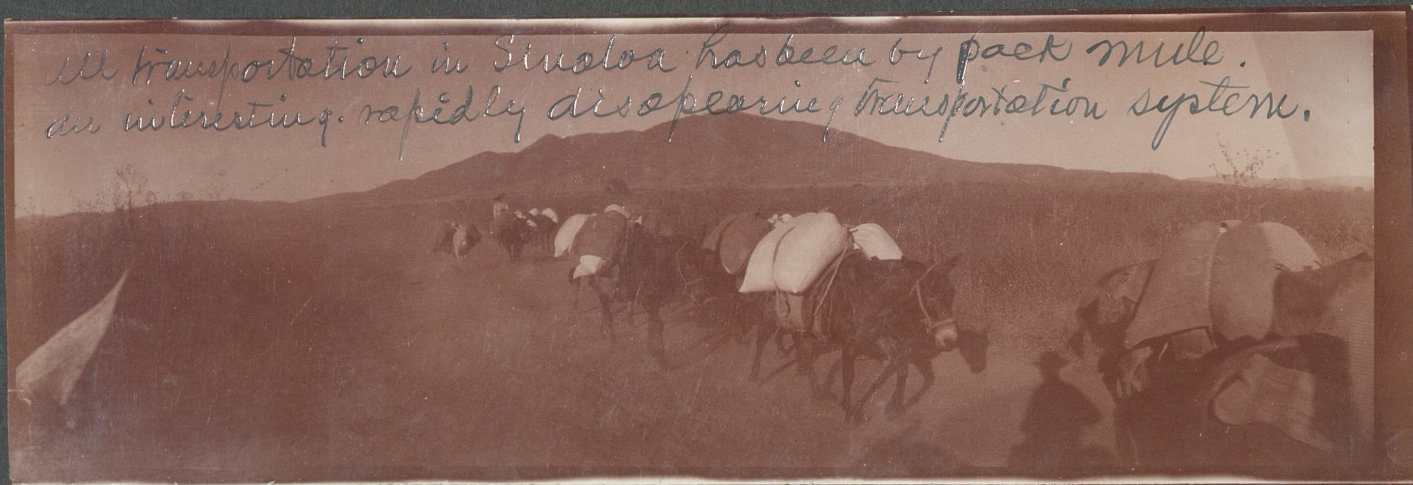
It appears certain that this great valley with its fertile lands at attractive prices, far below that of similar land in the United States, will be colonized by a thrifty people.

I predict tonnage for the railroad from the Yaqui valley equal in quantity to that of Imperial Valley in California, the soil is superior if there be any difference and the climate similar.

MINING.

The need for a smelter at a convenient point on the Sonora Railway System is very great. With a local smelter vast quantities of ore of lower grade than will bear transportation to El Paso or San Francisco will be treated at a profit, affording revenue to the Railroad that would never be earned if the ore was forced to go to El Paso, or not be smelted.

All transportation in Sinaloa has been by pack mule.
an interesting rapidly disappearing transportation system.



W. H. HOLABIRD

318 TITLE INSURANCE BUILDING
LOS ANGELES

BEGS TO PRESENT HIS NAME AS A COMPETENT
APPRAISER OR RECEIVER, SHOULD YOU
REQUIRE SUCH SERVICES.

His qualifications and experience cover:

- 20 years in the general Real Estate business.
- 10 years reporting upon the resources of the Pacific Coast States, including every County in California, for the late E. H. Harriman.
- 6 1/4 years as receiver of the California Development Company, supplying Imperial Valley with water.
- Chairman of the Board of Referees partitioning the estate of the late Arcadia B. de Baker, 1916.

All transportation in Sinaloa has been by pack mule.
an interesting rapidly disappearing transportation system.



318 Little Mt Bldg Los Angeles
Mch 17. 1917

Southern Pacific Co
Legal Dept to W.H. Holabird

Expert testimony & examination
of Lands.

Trunk.	2 days on the Tefunga	50.00	100.00
"	1 " " Covina wash		50.00
Fily	1 " " Tefunga		50.00
Mch	1 " " "		50.00
"	9 " " in Court (Tefunga suit)		50.00
			<u>\$300.00</u>

Submitted by
W.H.H.

The need of smelters on the west coast of Mexico at other points than Guymas or thereabouts, became very apparent to me in my investigations of the mineral wealth of the country.

From Alamos south to Guadalajara there are many hundreds of mining properties developed and partially developed, lying dormant: in many instances thousands of tons of ore upon the dump, because it is well known that ore of less than \$100. gold per ton value cannot be packed to the seaboard upon mules at a profit for shipment to San Francisco.

S I N A L O A.-

By consulting the map you will observe that the Harriman system of Mexican Railways cross the rivers of the West Coast at right angles. Between the Sierra Madra where the rivers have their source, and the Pacific Ocean, there are no intermediate mountains.

From the low foot-hills, the mountains rise rapidly eastward to their apex, while to the west, stretch away to the sea. A magnificent valley, 400 miles in length by 15 to 30 miles in width, comparatively as Nature created it.

Through the center, parallel to the Coast, runs the Southern Pacific concession. It afforded a picture of unrivalled beauty as I viewed it from the mountains east of Culiacan. Four splendid rivers, like threads of silver, were plainly visible.

The country is covered with rank vegetable growth, showing plainly the fertility of the soil and abundant summer rains.



a modern Mission atquila Sinaloa



Sinaloa Land Co. near Culiacan.



on the trail



The valley of the Culiacan River



The Hacienda of the S L Co
below Culiacan

CULIACAN, THE CAPITAL CITY.-

Culiacan, the capital city, is practically in the center of the State and on the banks of Culiacan River; connected with the outside world by a railroad some 40 miles long through the port of Altata.

The fertility of the Culiacan valley is shown in several well cultivated haciendas, where all kinds of root crops: corn, beans, sugar cane and tropical fruits, were growing.

Culiacan will grow in commercial importance with the advent of the Southern Pacific R. R., owing to its political and geographical situation.

A California corporation known as the "Sinaloa Land Company" have their headquarters here. This company have acquired very large land holdings in Sinaloa by virtue of a concession from the Federal Government who granted one-third of the Public domain to the corporation as compensation for a survey of the State. They propose to enter very largely into colonization work.

S I N A L O A.-

Sinaloa is 27000 square miles in area and claims a population of 296,000, 90 per cent. of whom are Indians or half-breeds. There are but eight cities in the State worthy of the name, of which Mazatlan ranks first with 16,000 population and Culiacan second with 14,000 population. The mineral zone covers three-fifths of the State.

The production of minerals for 1906 was \$14,000,000.



With no transportation facilities.

There are no smelters in Sinaloa, unless it be a few very small plants at mines too remote to pack their ore, and ore too rich to lie dormant.

There are eleven rivers crossing the State of Sinaloa, many of them flowing to the sea throughout the entire year, affording water sufficient for the necessary irrigation of from one hundred thousand to three hundred thousand acres bordering each stream.

During the summer months the streams become rivers of great width and volume.

The only irrigation practiced to any extent on the West Coast of Mexico is by sugar cane planters. The only alfalfa grown in Sinaloa is on the Fuerte River below San Blas where a survey has shown 250,000 acres of fine land susceptible of irrigation with the Fuerte River furnishing an abundant supply, 5,000 acres are now under cultivation and irrigation.

THE TERRITORY OF TEPIC.-

The Territory of Tepic begins about 75 miles south from Mazatlan. The coastal plain, or valley land, is extensive, the mountains rough and until the plateau or Mesa 3000' altitude is reached is heavily timbered. It is more tropical in climate, tobacco, sugar cane, pineapples, and mangoes grow luxuriantly. It is well watered.

The rich lands constituting the coastal plain are largely in the state Nature left them. Though considerable cotton, tobacco and cane is produced, coffee can be grown on

a Bull fight at Santiago. below Mazatlan.



a large area of the foot-hill country.

C L I M A T E . -

The climate of the low valleys and Coastal plain is not healthful during the summer, while that of Tepic City with its 3000' altitude is delightful the year around. The entire Territory is divided into immense holdings owned by few people.

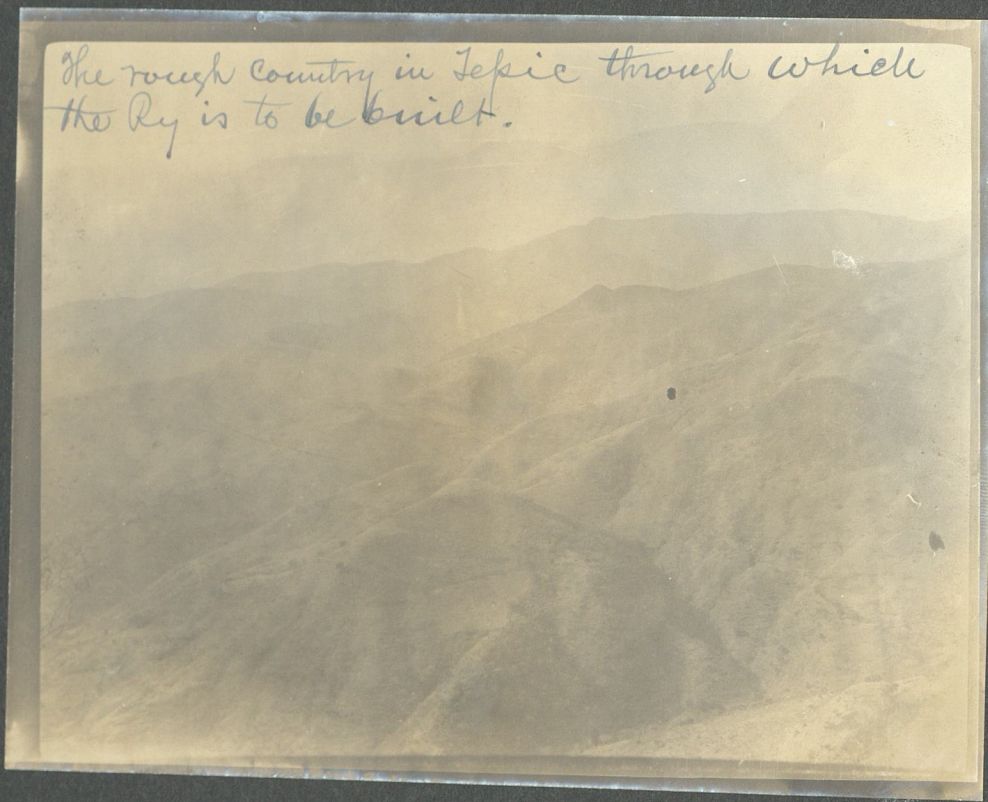
THE SANTIAGO RIVER. -

The Santiago River, flowing from Lake Chapala near Guadalajara, is the largest and most important river in Mexico. It flows through a rough and almost inaccessible mountain country a major portion of its course. Many falls and rapids exist, making possible the development of power for electrical transmission in very large units.

To examine the possibilities for power development, the outfit must be organized at Guadalajara, or Mazatlan (probably best at the latter city).

The only months when a reconnaissance is possible are January to May. The water is hardly fit for drinking. The Indians unfriendly, so thorough preparation should be considered if the attempt is made.

The rough country in Tepic through which
the Ry is to be built.



Summing up the observations made:

MINES AND MINING.-

"Whatever the agricultural wealth of the West Coast of Mexico may be in the future, the mineral wealth will so far exceed it as to surprise the railroad company by its magnitude", said the most intelligent American along general lines that I met in Mexico, one who has lived 37 years in Sinaloa and who is largely interested in both lands and mines.

The entire mountain system, including the partially isolated spurs and groups near the gulf, is highly mineralized, copper, gold and silver predominating.

The ores are principally refractory or sulphides, the values only extracted by smelting. When comparatively free from sulphides, the cyanide process is practiced, as at the great Tajo mine in Rosario, South Sinaloa. This mine has been in operation more than two hundred years, has 80 miles of tunnels and drifts, and is still paying dividends, the cyanide process enabling the owners to treat ores at a profit that were formerly considered waste.

Thousands of mines have been discovered in Sonora, Sinaloa and Tepic, unprofitable to work without railroad transportation. Many of these will be opened up profitably both to the miner and the carrier with the advent of the railroad.

The larger or going properties are anxious for the railway, they need modern machinery, impossible for them to transport otherwise.

The Coast near Mazatlan.



S M E L T E R S . -

This leads up to the subject of smelters. In my judgment a large smelter should be erected at Mazatlan. The earnings of the railroad with a smelter at this point will be very large, as ores of a low value can be moved from points throughout Southern Jalisco along the Mexican Central branch leading to San Marcos, all of Tepic and all of Sinaloa. From natural necessity this smelter must be at tide-water, where coke from the world's market can be delivered by ship; also within reach of vast quantities of ore from the Coast of Mexico out of reach of railroad transportation.

I believe the tonnage produced by such a smelter would be most profitable to the railroad company.

LOCAL RAILROADS . -

There are two local railroads whose ownership by the Southern Pacific concession would seem to be desirable: The Stillwell line, Topolobampo to Fuerte; the Occidental line, Altata to Culiacan. Without the control of these little railroads, rates will be disturbed and unsatisfactory in an otherwise profitable territory.

RAILROAD FACILITIES FOR MINES . -

Between the rivers railroads leading to mines justifying the expenditure, can be very cheaply constructed, and having no streams to cross as a rule, maintenance will be also cheap, such feeders are sure to be needed, and it is probable that mine owners will readily respond to any reasonable demand as to aiding in construction, or a subsidy perhaps.



It is a promising field for the development of branch lines, as both mining and agricultural interests would be greatly benefited.

SEA PORTS.-

There are but five sea ports on the entire Coast as far south as Manzanillo, namely:

Guymas, with an excellent harbor.

Topolobampo, the terminus of the Kansas City, Mexico & Orient. R. R. The "Stillwell Line".

Altata, at the mouth of Culiacan River, with R. R. connection to the capital of the State.

Mazatlan, the chief commercial city of the State, which will doubtless become a most important place when given railroad facilities.

San Blas, in Territory of Tepic, said to be a much better harbor than Mazatlan.

With the opening of the Panama Canal, shipping will increase to and through all of these ports, hence, the importance of securing all of the rail connections to said ports.

AGRICULTURE.-

A great area of fertile agricultural lands will be opened up for settlement upon completion of the Southern Pacific concession to Guadalajara, aggregating more than one million acres of strictly valley land, and a much larger area of intervening level lands producing an abundant crop by aid of the summer rains.



Ainaloa Corn field

The range of products possible is exceedingly large:

Wheat, corn and barley, all of the root crops of the Temperate Zone, sugar cane, rice, tobacco, cotton, bananas, (citrus fruits are indigenous.) Fibre plants, such as Maguey ("Agave Americana") Sisal ("Agava Ixtli"), both indigenous, will produce great tonnage as the industry pays handsomely and the world's demand is constantly increasing.

STOCK RAISING.-

I have never seen finer cattle than in Sinaloa, all grown under the hardest of conditions, nothing but browse during the dry months, yet up to a high standard both as to size and general appearance.

COLONIZATION.-

The climate, the system of government, the religion of the native inhabitants all lead me to the conclusion that colonization work can be most successfully accomplished among the inhabitants of South Europe, Italy, Spain and Portugal. The Italians who have settled in California have become the most intelligent of farmers, and the same can be said of the Portuguese along the coast in Marin County and elsewhere in California. It does not appeal to me that the average American seeking new homes will be as contented and assimilate as quickly with the Mexican people as the Europeans named.

That Americans will furnish the capital for irrigation and other developments I have no doubt, but that does not mean permanent settlement in the country.

Ready to begin the work of redemption in Sonora.



my outfit on the summit near Clota. Sinaloa



abundant; the flamingo, several kinds of Ibis, brilliant in plumage along the streams.

Deer of large size are also very numerous.

The Mexican Tiger, sometimes called "Jaguar", is numerous and a dangerous beast. Leopard cats, larger than our wild cats are everywhere. It is not pleasant hunting, as the brush, so abundant, is literally covered with ticks that make the hunter's life miserable.

CONSTRUCTION.-

I have been connected with railroads for many years, have seen many new railways under construction, but have never before noticed so superior an organization as is evidenced along the right ofway through Sinaloa. The cleaning of the right of way, the preparation of new camps, the water supply, all accomplished in ample time. No idlers, no confusion and no apparent waste. It certainly reflects great credit upon the management.

CONCLUSION.-

The country traversed is so vast, the possibilities so great, it is impossible to cover the general subject in detail and do it justice without being too lengthy.

Trusting the information herein may be of some value,
I remain,

Yours to command,

Wm. H. Holabird.

Economic Expert,

Southern Pacific Company.



Acobonilla. Tepic

EXPORTS

from
MAZATLAN, MEXICO

to

THE UNITED STATES

for the year 1907.

Bullion,	Gold	1,104,645.30
	Silver,	1,657,218.89
Concentrates,	Gold,	135,429.55
	Lead,	983.50
	Silver	171,767.91
Copper,		2,631.47
Coin,		190,235.00
Cocoanuts		581.29
Fish, dried,		13,117.38
Guano,		2,500.00
Hides,		123.75
		335.49
	Alligator,	4,822.77
	Calf,	25.00
	Deer,	1,693.50
	Fur,	1,761.55
	Goat,	74.06
	Hog,	10,743.34
	Horse,	107.46
	Ox,	182.50
	Pecarry,	25,364.23
Horns,		10,386.75
Textile,		36,334.44
Matte,		175.61
	Copper,	16,913.24
	Gold,	9,736.93
	Lead,	36,055.20
Ore,	Silver,	10,524.98
		192,303.60
	Precipitates,	14,923.26
	Gold,	33,324.36
	Silver,	2,818.12
Ret. American Goods,		15,696.57
Shrimps,		28,473.03
Sulphides,		1,700.00
Slack fins,		576.26
Shark fins,		13,710.41
Tomatoes, green,		

Total 3,747,996.70 U.S. Gold.

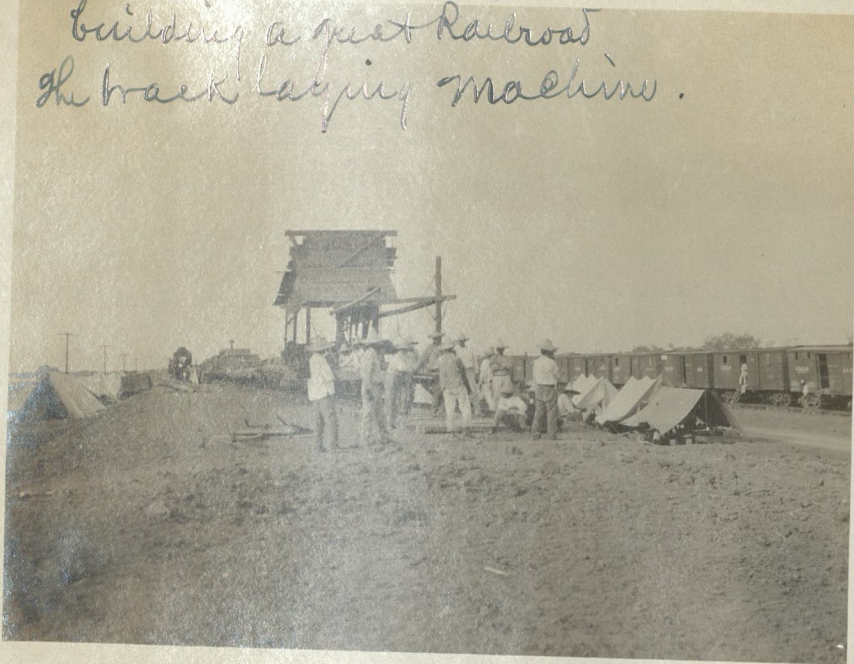
One of the old Churches in the sparsely settled
interior





Sinclair
Land
Co
at
their
Hacienda

building a great Railroad
the track laying machine.



The young man is the foreman of the machine



C Cude Hill where
Mescal is made from the
wild Mescal plant.



One of the many rivers we crossed.

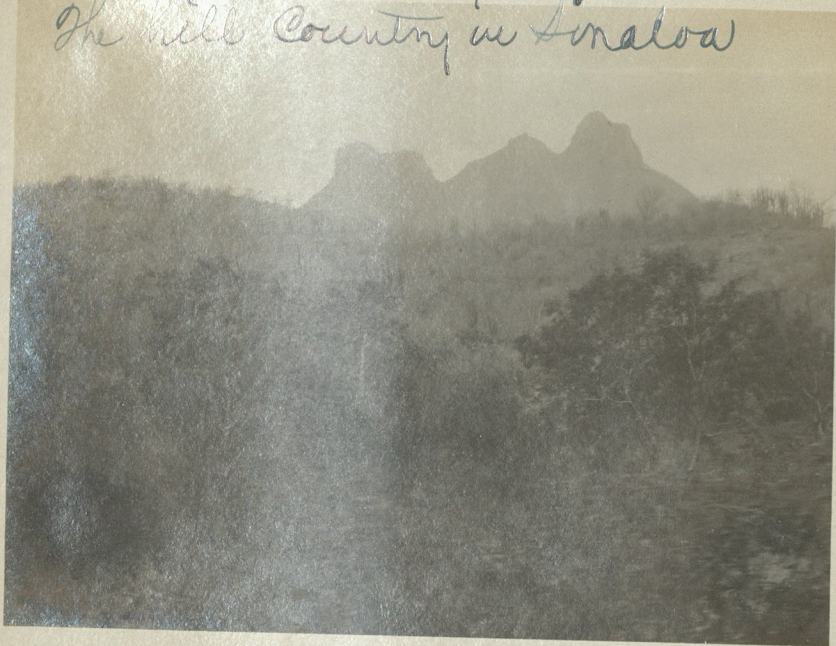


No. 175. MEXICO. Diligencia de Tepic.

"La Joyita" 1.^a San Francisco, 14.— Mexico

El Santiago River

The Hill Country in Sinaloa



rather a rough road to
travel over.



The pretty City of Ahuacatlan
Tepic



Peasants homes by the wayside





ready for the work



Cotton



Culiacan



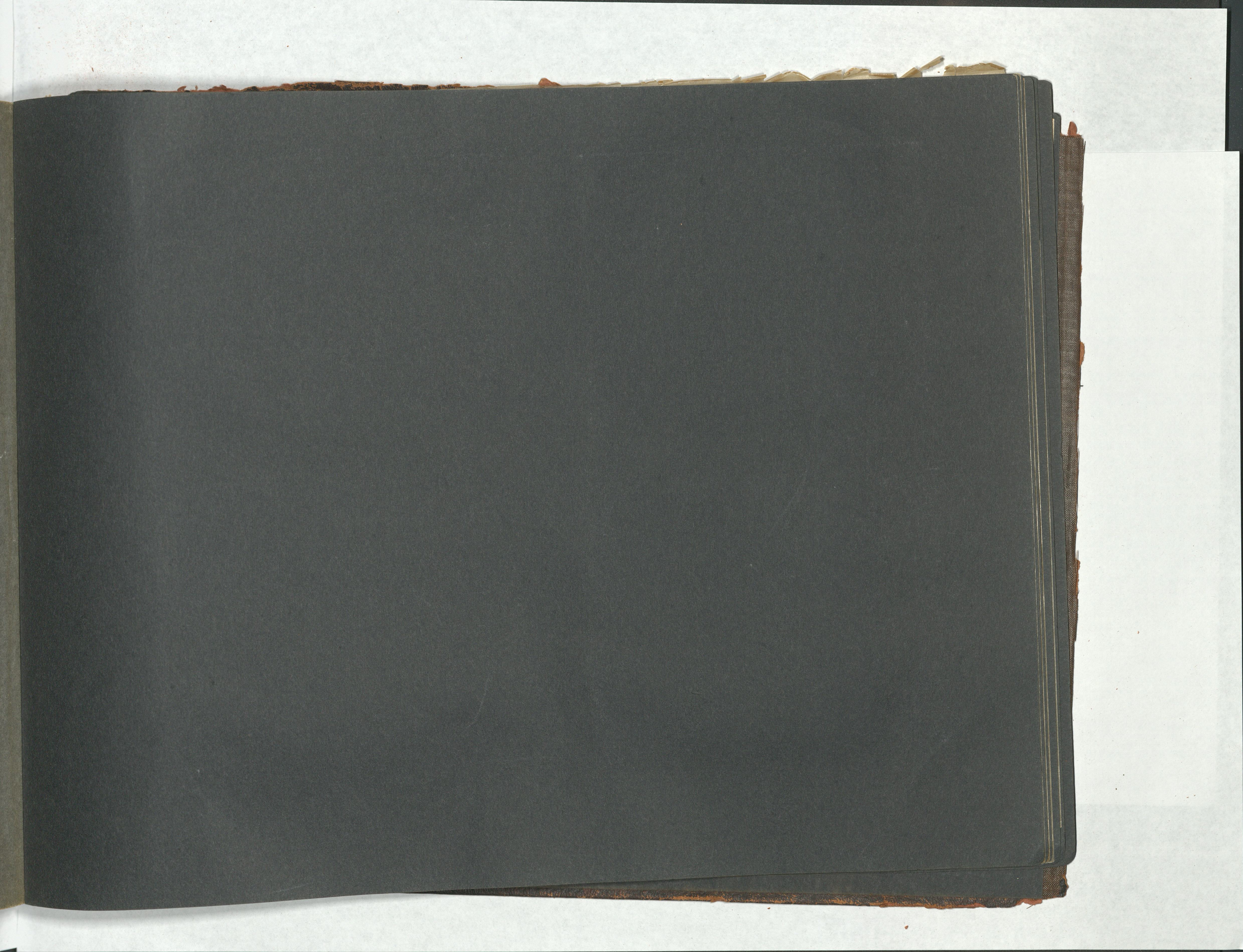
the author at Mazatlan



Senor Barabas Guila



on the Camino Real

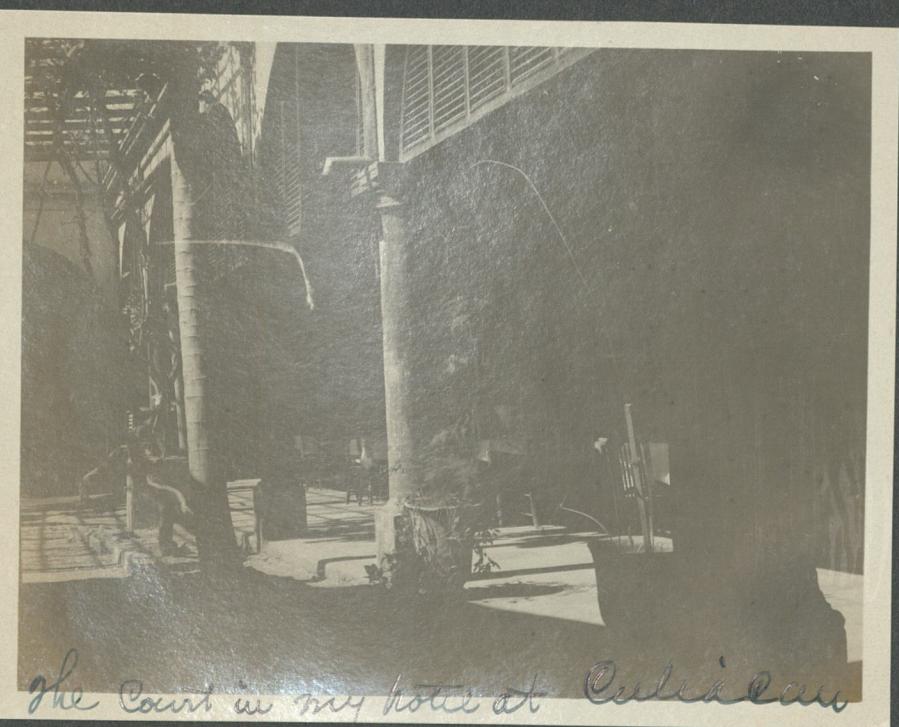




A new station



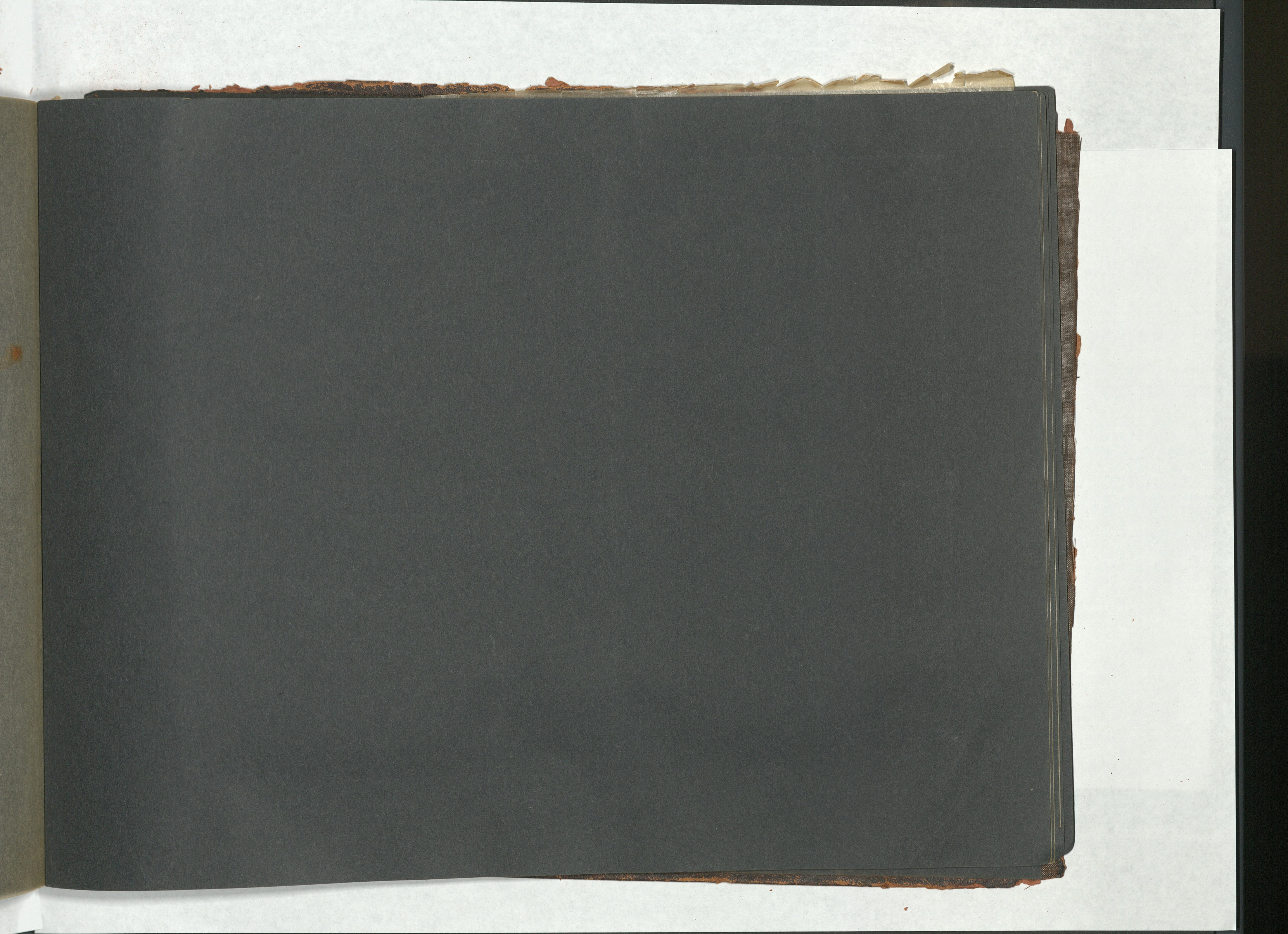
across the street from my Hotel

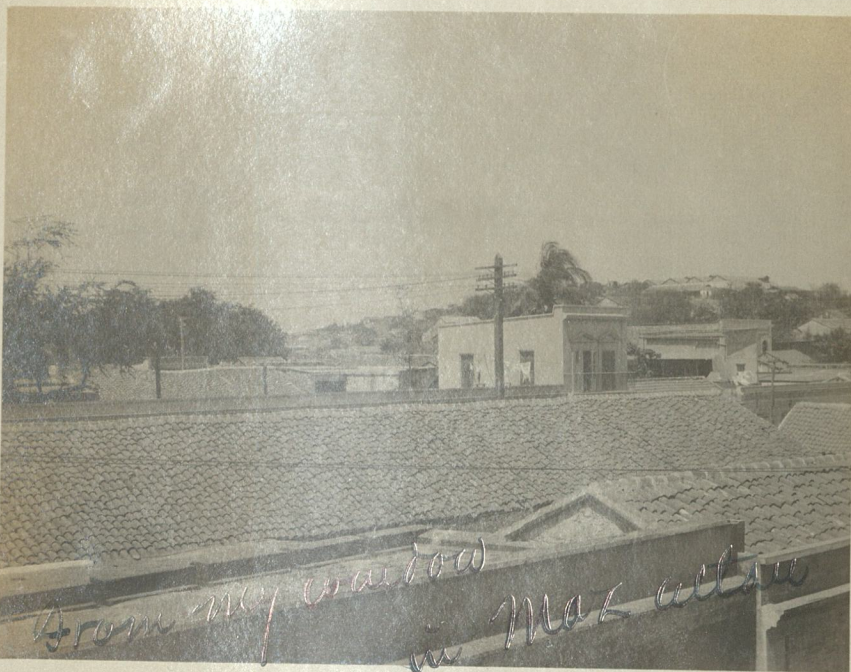


The Court in my hotel at Culiacan



A Beautiful tree





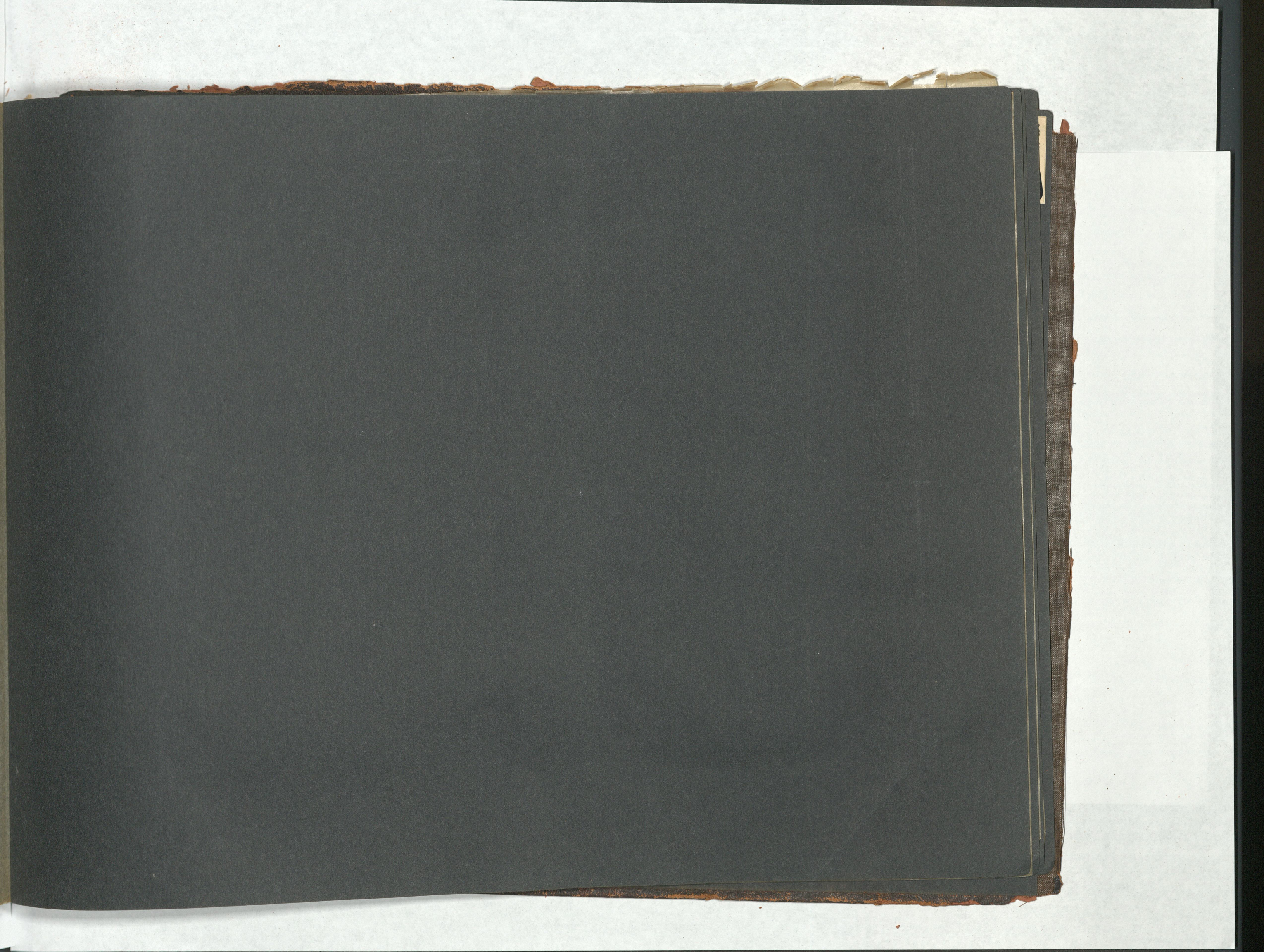
from my window
in Mazatlan



a little station on the
RR from Culiacan to Altata



Guila





Culiacan



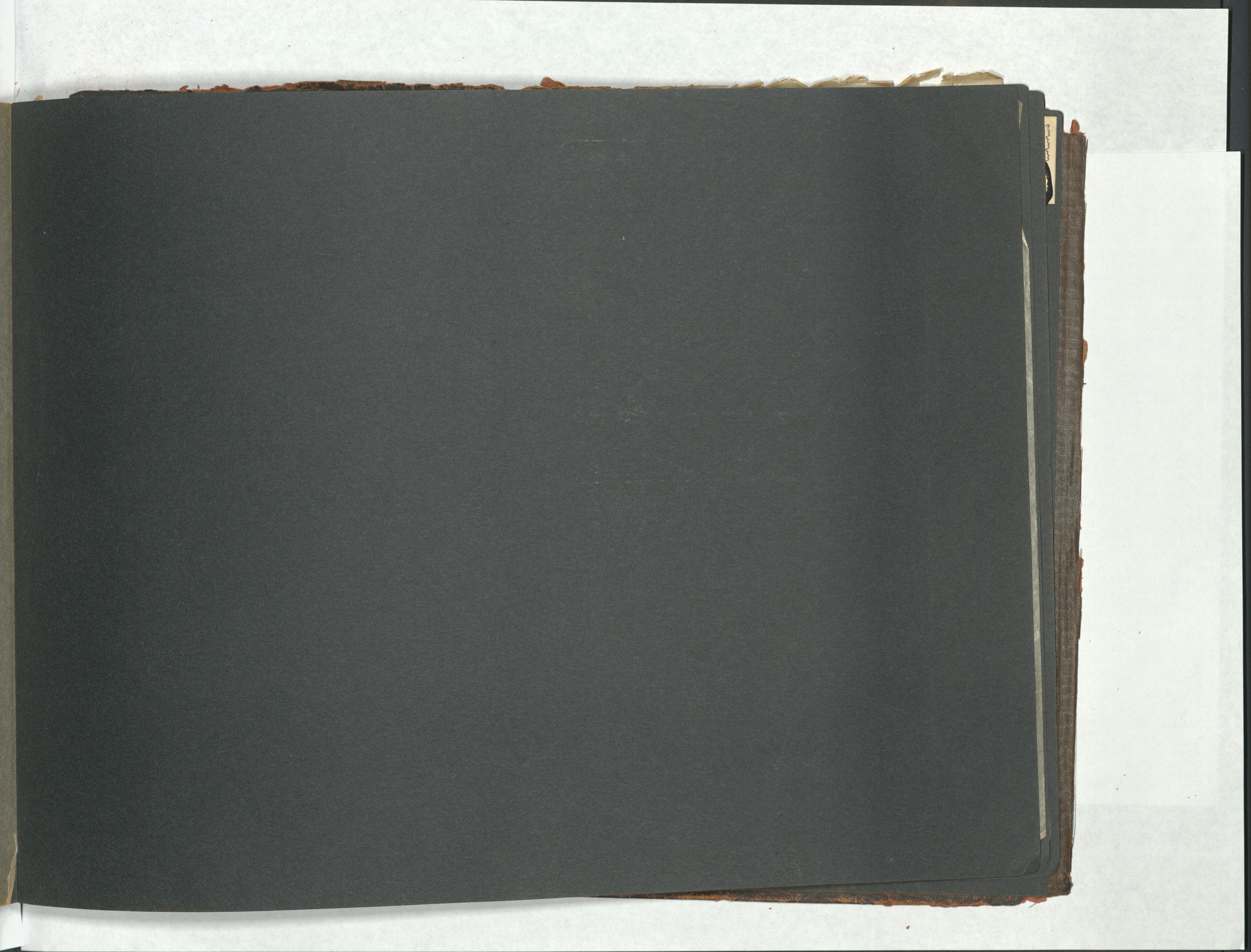
Mavahoa

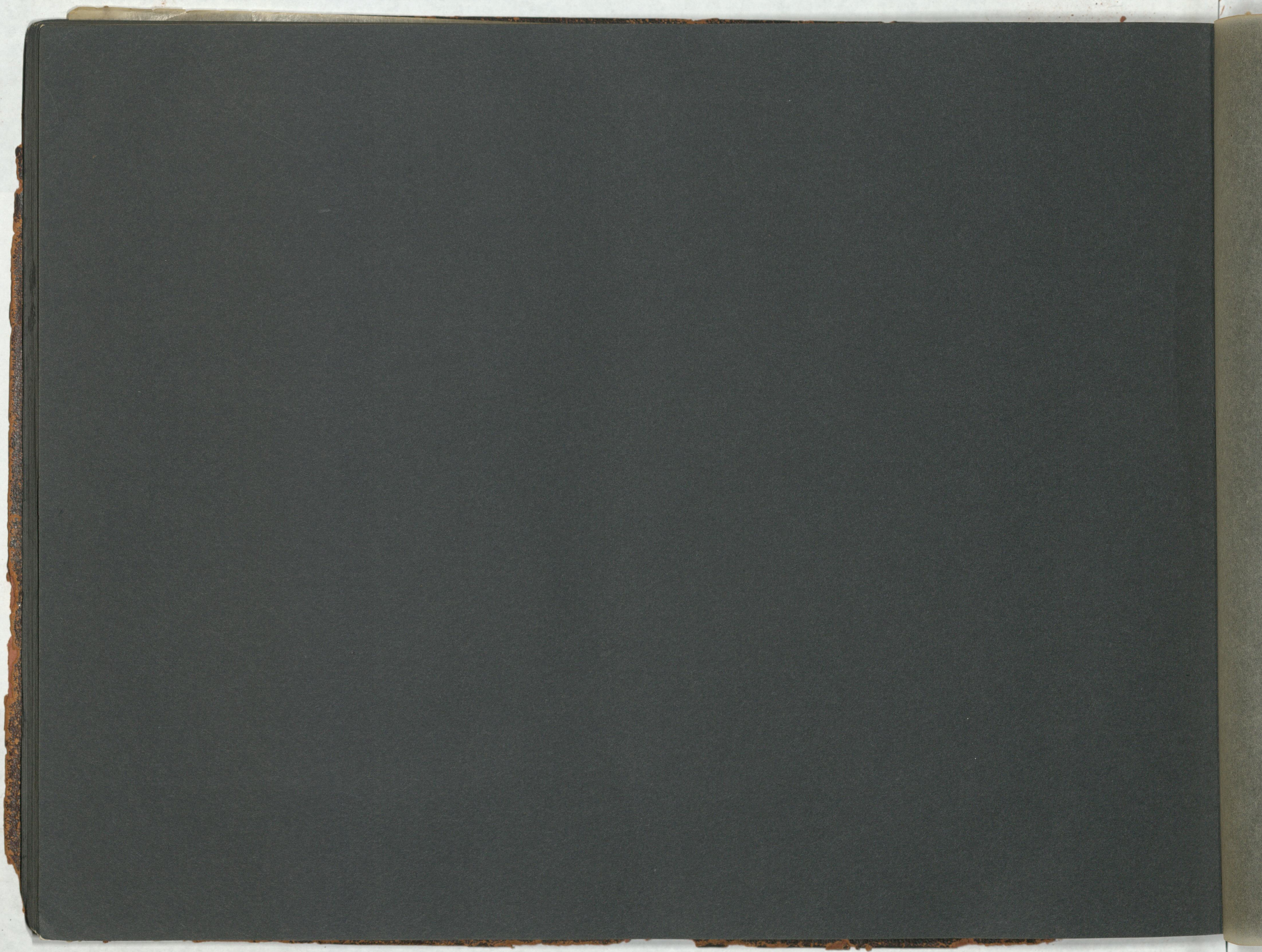


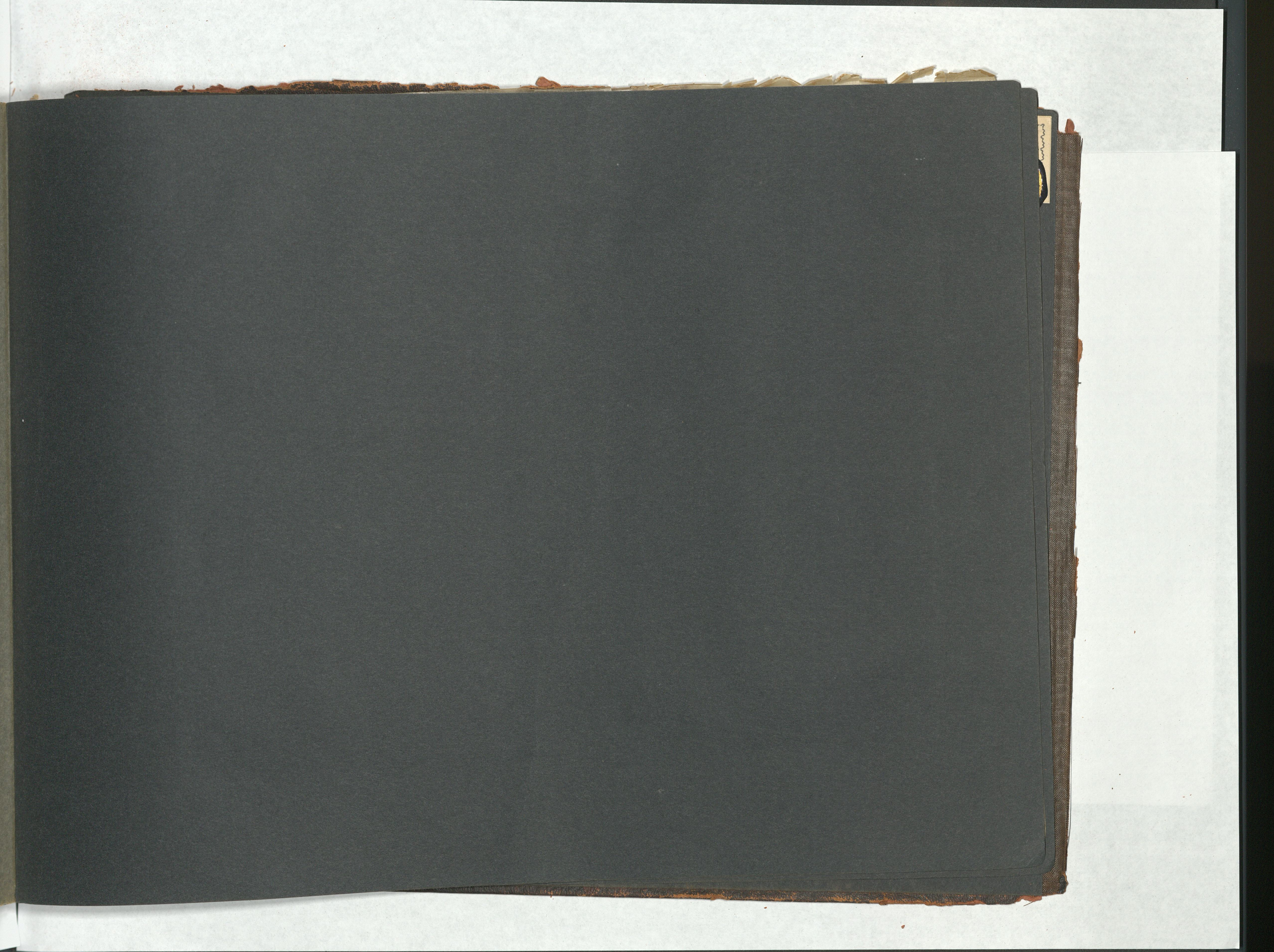
Culiacan



Elota









643
LOS ANGELES
MERRICK
EAST
SUPPLY
DEPT
BRO

